54. (New) An isolated polynucleotide comprising a nucleotide sequence encoding: (a) the amino acid sequence set forth from amino acid number 1 to 273 in SEQ ID NO:65; or (b) the amino acid sequence unique to the rchd534-long protein encoded by the cDNA contained in plasmid pHL6TA1A, as deposited with the American Type Culture Collection as Accession No. 209615.

B1 (cont'd)

55. (New) An isolated polynucleotide comprising the nucleotide sequence: (a) set forth in SEQ ID NO:64; or (b) of the cDNA contained in plasmid pHL6TA1A, as deposited with the American Type Culture Collection as Accession No. 209615.

56. (New) An isolated polynucleotide comprising the nucleotide sequence: (a) from nucleotide number 155 to 1642 set forth in SEQ ID NO:64; or (b) of the polypeptide coding sequence of the cDNA contained in plasmid pHL6TA1A, as deposited with the American Type Culture Collection as Accession No. 209615.

57. (New) An isolated polynucleotide comprising the nucleotide sequence: (a) set forth from nucleotide residue number 155 to 973 set forth in SEQ ID NO:64; or (b) of the polypeptide coding sequence unique to rchd534-long protein of the cDNA contained in plasmid pHL6TA1A, as deposited with the American Type Culture Collection as Accession No. 209615.

58. (New) An isolated polynucleotide consisting of a the nucleotide sequence of Claim 53.

59. (New) An isolated polynucleotide consisting of the nucleotide sequence of Claim 55.

60. (New) An isolated polynucleotide consisting of the nucleotide sequence of Claim 56.

61. (New) An isolated polynucleotide which hybridizes under highly stringent conditions to the nucleotide sequence of Claim 54; said highly stringent hybridization conditions consisting of hybridization to filter-bound DNA in 0.5 M $NaHPO_4$, 7% sodium dodecyl sulfate, 1mM EDTA at 65°C and washing in 0.1xSSC/0.1% SDS at 68°C.

B1 (cont'd)

62. (New) The isolated polynucleotide of Claim 61, wherein said isolated polynucleotide is down-regulated in endothelial cells under shear stress and encodes a protein which inhibits TGF-β signalling.

63. (New) An isolated polynucleotide which hybridizes under highly stringent conditions to the nucleotide sequence of Claim 56; said highly stringent hybridization conditions consisting of hybridization to filter-bound DNA in 0.5 M $NaHPO_4$, 7% sodium dodecyl sulfate, 1mM EDTA at 65°C and washing in 0.1xSSC/0.1% SDS at 68°C.

64. (New) The isolated polynucleotide of Claim 63, wherein said isolated polynucleotide is down-regulated in endothelial cells under shear stress and encodes a protein which inhibits TGF-β signalling.

65. (New) An isolated polynucleotide which hybridizes under highly stringent conditions to the nucleotide sequence of Claim 57; said highly stringent hybridization conditions consisting of hybridization to filter-bound DNA in 0.5 M $NaHPO_4$, 7% sodium dodecyl sulfate, 1mM EDTA at 65°C and washing in 0.1xSSC/0.1% SDS at 68°C.

66. (New) The isolated polynucleotide of Claim 65, wherein said isolated polynucleotide is down-regulated in endothelial cells under shear stress and encodes a protein which inhibits TGF-β signalling.

B1 (cont'd)

67. (New) The isolated polynucleotide of Claim 61, 62, 63, 64, 65, or 66 which is human.

68. (New) The isolated polynucleotide of Claim 54, 57, 61, or 65, which is DNA.

69. (New) The isolated polynucleotide of Claim 54, 57, 61, or 65, which is RNA.

70. (New) A polynucleotide vector containing the polynucleotide of Claim 54, 57, 61, or 65.

71. (New) A polynucleotide expression vector containing the polynucleotide of Claim 54, 57, 61, or 65, in operative association with a nucleotide regulatory element which controls expression of the polynucleotide in a host cell.

72. (New) A cultured genetically engineered host cell containing the polynucleotide of Claim 54, 57, 61, or 65.

73. (New) A cultured genetically engineered host cell containing the polynucleotide of Claim 54, 57, 61, or 65, in operative association with a nucleotide regulatory element which controls expression of the polynucleotide in the host cell.

74. (New) The genetically engineered host cell of Claim 73 which is prokaryotic.

75. (New) The genetically engineered host cell of Claim 73 which is eukaryotic.

B1 (Cont'd)

76. (New) A method of producing an rchd543-long polypeptide or polypeptide fragment, comprising the steps of:

(a) growing the genetically engineered host cell of Claim 74 in a culture; and

(b) collecting the polypeptide or polypeptide fragment from the culture.

77. (New) A method of producing an rchd543-long polypeptide or polypeptide fragment, comprising the steps of:

(a) growing the genetically engineered host cell of Claim 75 in a culture; and

(b) collecting the polypeptide or polypeptide fragment from the culture.

78. (New) An isolated polynucleotide consisting of at least 14 contiguous nucleotides of the nucleotide sequence from residue number 155 to 973 of SEQ ID NO:64.

79. (New) The polynucleotide of Claim 78, wherein said polynucleotide is at least 17 contiguous nucleotides of the nucleotide sequence from residue number 155 to 973 of SEQ ID NO:64.